

WHAT IS CLAIMED IS:

1. A filter for use with a pulse wave sensor which is adapted to be worn on a body portion of a living subject to detect a pulse wave from the body portion, and outputs a signal representing the detected pulse wave, wherein the filter cuts off a reflected wave component of the signal that has frequencies falling within a low frequency band, and allows a rising portion of an incident wave component of the signal that has frequencies falling within a high frequency band, to pass therethrough.

2. A pulse wave analyzing apparatus, comprising:
a pulse wave sensor which is adapted to be worn on a body portion of a living subject to detect a pulse wave from the body portion, and outputs a pulse wave signal representing the detected pulse wave;

a plurality of filters for use with the pulse wave sensor, the plurality of filters having respective low-side cut-off frequency bands differing from each other, and each receiving the pulse wave signal outputted by the pulse wave sensor;

a provisional rising point determining means for determining a time of detection of a provisional rising point of each of respective pulse waves represented by respective signals that have passed through the filters; and

a proper rising point determining means for comparing the respective times of detection of the respective provisional rising points, each determined by the provisional rising point determining means, with each other, and thereby determining a time of detection of a proper rising point based on the respective times of detection of the respective provisional rising points.

3. The pulse wave analyzing apparatus according to claim 2, wherein the proper rising point determining means determines, when at least two times of the respective times of detection of the respective provisional rising points are substantially equal to each other, said at least two times substantially equal to each other, as the time of detection of the proper rising point.

4. The pulse wave analyzing apparatus according to claim 2, wherein the proper rising point determining means determines, when the respective times of detection of the respective provisional rising points of the respective pulse waves represented by the respective signals that have passed through the filters decrease as respective upper limits of the respective low-side cut-off frequency bands of the corresponding filters increase, a shortest one of the respective times of detection of the respective provisional rising points, as the time of detection of the proper rising point.

5. The pulse wave analyzing apparatus according to claim 2, wherein the pulse-wave sensor comprising an inflatable cuff adapted to be worn on the body portion of the subject, and wherein the proper rising point determining means determines, when the respective times of detection of the respective provisional rising points of the respective pulse waves represented by the respective signals that have passed through the filters increase as respective upper limits of the respective low-side cut-off frequency bands of the corresponding filters increase, a shortest one of the respective times of detection of the respective provisional rising points, as the time of detection of the proper rising point.

6. A method of using a filter with a pulse wave sensor which is adapted to be worn on a body portion of a living subject to detect a pulse wave from the body portion, and outputs a signal representing the detected pulse wave, the method comprising the step of

using the filter to cut off a reflected wave component of the signal that has frequencies falling within a low frequency band, and allow a rising portion of an incident wave component of the signal that has frequencies falling within a high frequency band, to pass therethrough.

7. A pulse wave analyzing apparatus, comprising:
a pulse wave sensor which is adapted to be worn on a body portion of a living subject to detect a pulse wave from the body portion, and outputs a pulse wave signal representing the detected pulse wave;

a plurality of filters for use with the pulse wave sensor, the plurality of filters having respective low-side cut-off frequency bands differing from each other, and each receiving the pulse wave signal

outputted by the pulse wave sensor;

a provisional rising point determining device which determines a time of detection of a provisional rising point of each of respective pulse waves represented by respective signals that have passed through the filters; and

a proper rising point determining device which compares the respective times of detection of the respective provisional rising points, each determined by the provisional rising point determining device, with each other, and thereby determining a time of detection of a proper rising point based on the respective times of detection of the respective provisional rising points.